

member on a common axis, a gear carrier fixed to one of said members, a plurality of at least three equidistantly spaced non-central gears rotatably supported by said carrier, a first central gear connected to another of said members and meshing with said non-central gears, a second central gear, an axial extension directly connected to said second central gear, a flexible connection between said axial extension and the remaining one of said members, and mating sets of gear teeth on said second central gear and said non-central gears, the flanks of at least one of said sets of teeth being of crowned shape in a longitudinal direction.

2. The combination according to claim 1, said flexible coupling comprising a first set of coupling teeth on said remaining member, and a second set of coupling teeth on said extension interfitting with said first set of coupling teeth, the relative dimensions of said sets of coupling teeth being such that limited angular shifting of said second central gear with respect to said remaining member may take place.

3. The combination according to claim 1, said crowned shapes being formed on said non-central gear teeth.

4. The combination according to claim 1, one of said central gears being an orbit gear.

5. In a gear transmission, a casing member, first and second shaft members rotatably supported by said casing member on a common axis, a gear carrier fixed to one of said members, a plurality of at least three equidistantly spaced non-central gears rotatably supported by said carrier, the flanks of said non-central gear teeth being crowned in a longitudinal direction, first and second central gears meshing with said non-central gears, extensions directly connected to said central gears, and flexible connections between said extensions and said other two members respectively, whereby both radial and angular shifting of said central gears with respect to said common axis will be permitted.

6. The combination according to claim 5, one of said central gears being an orbit gear, the extension on said orbit gear comprising a thin-walled and apertured tubular portion, the flexible coupling for said orbit gear including interfitting coupling teeth formed on said extension and its connected member.

7. In a planetary gear transmission, a casing, first and second shafts rotatably supported by said casing on a common axis, a planet gear carrier fixed to one of said shafts, a plurality of at least three equidistantly spaced planet gears rotatably supported by said carrier, a sun gear meshing with said planet gears, an axial extension directly connected to said sun gear, a flexible connection between said extension and said other shaft, an orbit gear meshing with said planet gears, an axial extension directly connected to said orbit gear, a flexible connection between said orbit gear extension and said casing, and teeth on said planet gears having flanks crowned in a longitudinal direction.

8. In a gear transmission, a casing, first and second shafts rotatably supported by said casing, a non-central gear carrier fixed to said casing, a plurality of at least three equidistantly spaced non-central gears rotatably supported by said carrier, a sun gear meshing with said non-central gears, an extension directly connected to said sun gear, a flexible coupling between said extension and one of said shafts, an orbit gear meshing with said non-central gears, an axial extension directly connected to said orbit gear, and a flexible coupling between said orbit gear extension and the other shaft, the teeth on said non-central gears having flanks crowned in a longitudinal direction, whereby both radial and angular movement of said sun and orbit gears with respect to said non-central gears will be permitted.

References Cited in the file of this patent

UNITED STATES PATENTS

618,272	Johnson	Jan. 24, 1899
2,252,967	Forton	Aug. 19, 1941
2,591,734	Smith	Apr. 8, 1952
2,700,311	Bade	Jan. 25, 1955
2,703,021	Stoeckicht	Mar. 1, 1955

FOREIGN PATENTS

682,275	Germany	Oct. 11, 1939
405,548	Italy	Aug. 19, 1943
253,321	Switzerland	Nov. 16, 1948
958,710	France	Sept. 19, 1949
664,297	Great Britain	Jan. 2, 1952